



A MILLIMAN GLOBAL FIRM

**Milliman**  
Consultants and Actuaries

1921 Gallows Road, Suite 900  
Vienna, VA 22182-3995  
Tel +1 703-917-0143  
Fax +1 703-827-9266  
www.milliman.com

November 10, 2005

State Budget and Control Board  
South Carolina Retirement Systems  
Columbia, South Carolina 29211

Re: Certification and Statement Regarding Actuarial Valuations as of July 1, 2004

Dear Members of the Board:

### **Applicable Laws**

The laws governing the operation of the various Retirement Systems provide that actuarial valuations of the assets and liabilities of the Systems shall be made annually for the South Carolina Retirement System and the Police Officers Retirement System and no less frequently than biennially for the General Assembly Retirement System and the Judges and Solicitors Retirement System. At your request, we have conducted an annual actuarial valuation of each of the four separate South Carolina Retirement Systems as of July 1, 2004.

### **Funding Objective**

A funding objective of the Systems is that contribution rates will remain relatively level over time as a percentage of payroll. As these contribution rates are set by the Board, the valuation is used to determine the sufficiency of the contributions to maintain or improve the measures of the Systems' funding progress (i.e. *funded ratio*, *funding period*) and provide for the complete funding of all actuarial liabilities within 30 years.

### **Funding Methodology**

The entry age normal actuarial cost method determines each system's normal cost, the cost of the current year's benefit accrual, as a level percentage of the active member's payroll. Additionally, the method determines the actuarial liability, the value of benefits already earned by active and retired members due to past service. A smoothing technique is utilized to produce a market-related actuarial value of assets with the goal of dampening the impact of investment return volatility. The *funded ratio* is the actuarial value of assets as a percentage of the actuarial liability.

An unfunded actuarial liability exists to the extent a System's actuarial liability exceeds its actuarial value of assets. The contribution amount in excess of a system's normal cost is the level percentage of payroll available to amortize an unfunded actuarial liability. The System's *funding period* is the resulting number of years necessary to fully amortize an unfunded actuarial liability with the available contributions.

### **Assumptions**

Actuarial assumptions are necessary to estimate the future economic and demographic experience of the Systems. The actuarial assumptions were recommended by the prior actuary and adopted by the State Budget and Control Board based on a review of the System's experience completed during Fiscal Year 2004. We have reviewed these assumptions and believe they are reasonable.

The current actuarial assumptions for each System are in accordance with the applicable Actuarial Standards of Practice, as well as the parameters set forth in the Governmental

OFFICES IN PRINCIPAL CITIES WORLDWIDE



State Budget and Control Board  
South Carolina Retirement Systems  
November 10, 2005  
Page 2

Accounting Standards Board (GASB) Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*.

The results and conclusions of this report are only valid for the July 1, 2004 plan year and should not be interpreted as applying in future years. Differences between our projections and actual amounts depend on the extent to which future experience conforms exactly to the assumptions used in this analysis. Actual amounts will differ from projected amounts to the extent that actual experience deviates from expected experience.

### Data Reliance

In preparing the valuations, we, as the actuary, relied on data provided by the Systems. In fulfillment of the scope of our assignment, we performed a limited review of the data for consistency and reasonableness and did not find material defects in the census data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete.

### Supporting Schedules

Our firm, as actuary, is responsible for the actuarial trend data in the financial section of the report and the supporting schedules in the actuarial section, beginning with the information for the July 1, 2003 to June 30, 2004 period. Information for previous years was supplied by other actuarial firms employed by the Systems at that time.

### Certification

Based on the results of the four July 1, 2004 valuations, we believe that the valuations are appropriately reflecting the plan's long term obligations and the current contribution levels are sufficient to fund the liabilities of each plan over a reasonable time frame, and based on these criteria may be deemed actuarially sound.

I, Robert Dezube, am a consulting actuary for Milliman. I am also a member of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. On the basis of the foregoing, I certify that, to the best of my knowledge this report is complete and accurate and has been prepared in accordance with South Carolina's statutes and generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board (ASB) and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries.

Respectfully submitted,

Milliman, Inc.

Robert S. Dezube, FSA, MAAA  
Principal and Consulting Actuary

RSD/JG/ST/SCR/10  
M:\SCR\2004val\Reports\SCRS CAFrv2.DOC

OFFICES IN PRINCIPAL CITIES WORLDWIDE

---

## Actuarial Section

---

### South Carolina Retirement System Valuation Balance Sheet As of Actuarial Valuation at July 1, 2004 (Amounts expressed in thousands)

	<u>July 1, 2004</u>
<b>1. <u>Assets</u></b>	
a. <u>Current Assets (Actuarial Value)</u>	
i) Employee Annuity Savings Fund	\$ 4,750,077
ii) Employer Annuity Accumulation Fund	16,112,582
iii) Total Current Assets	<u>\$ 20,862,659</u>
b. <u>Present Value of Future Member Contributions</u>	\$ 2,743,400
c. <u>Present Value of Future Employer Contributions</u>	
i) Normal Contributions	\$ 2,142,726
ii) Accrued Liability Contributions	5,115,193
iii) Total Future Employer Contributions	<u>\$ 7,257,919</u>
d. <u>Total Assets</u>	<u><u>\$ 30,863,978</u></u>
<b>2. <u>Liabilities</u></b>	
a. <u>Employee Annuity Savings Fund</u>	
i) Past Member Contributions	\$ 4,750,077
ii) Present Value of Future Member Contributions	2,743,400
iii) Total Contributions to Employee Annuity Savings Fund	<u>\$ 7,493,477</u>
b. <u>Employer Annuity Accumulation Fund</u>	
i) Benefits Currently in Payment	\$ 14,184,765
ii) Benefits to be Paid to Current Active Members	9,185,736
iii) Total Benefits Payable from Employer Annuity Accumulation Fund	<u>\$ 23,370,501</u>
c. <u>Total Liabilities</u>	<u><u>\$ 30,863,978</u></u>



---

## Actuarial Section

---

### Police Officers Retirement System Valuation Balance Sheet As of Actuarial Valuation at July 1, 2004 (Amounts expressed in thousands)

	<u>July 1, 2004</u>
<b>1. <u>Assets</u></b>	
a. <u>Current Assets (Actuarial Value)</u>	
i) Employee Annuity Savings Fund	\$ 548,699
ii) Employer Annuity Accumulation Fund	2,068,136
iii) Total Current Assets	<u>\$ 2,616,835</u>
b. <u>Present Value of Future Member Contributions</u>	\$ 425,174
c. <u>Present Value of Future Employer Contributions</u>	
i) Normal Contributions	\$ 453,461
ii) Accrued Liability Contributions	367,749
iii) Total Future Employer Contributions	<u>\$ 821,210</u>
d. <u>Total Assets</u>	<u><u>\$ 3,863,219</u></u>
<b>2. <u>Liabilities</u></b>	
a. <u>Employee Annuity Savings Fund</u>	
i) Past Member Contributions	\$ 548,699
ii) Present Value of Future Member Contributions	425,174
iii) Total Contributions to Employee Annuity Savings Fund	<u>\$ 973,873</u>
b. <u>Employer Annuity Accumulation Fund</u>	
i) Benefits Currently in Payment	\$ 1,415,627
ii) Benefits to be Paid to Current Active Members	1,473,719
iii) Total Benefits Payable from Employer Annuity Accumulation Fund	<u>\$ 2,889,346</u>
c. <u>Total Liabilities</u>	<u><u>\$ 3,863,219</u></u>

---

## Actuarial Section

---

### General Assembly Retirement System Valuation Balance Sheet As of Actuarial Valuation at July 1, 2004

	<u>July 1, 2004</u>
<b>1. <u>Assets</u></b>	
a. <u>Current Assets (Actuarial Value)</u>	
i) Employee Annuity Savings Fund	\$ 8,485,000
ii) Employer Annuity Accumulation Fund	<u>36,602,000</u>
iii) Total Current Assets	\$ 45,087,000
b. <u>Present Value of Future Member Contributions</u>	\$ 2,469,007
c. <u>Present Value of Future Employer Contributions</u>	
i) Normal Contributions	\$ 1,962,830
ii) Accrued Liability Contributions	<u>23,245,001</u>
iii) Total Future Employer Contributions	\$ 25,207,831
d. <u>Total Assets</u>	<u>\$ 72,763,838</u>
<b>2. <u>Liabilities</u></b>	
a. <u>Employee Annuity Savings Fund</u>	
i) Past Member Contributions	\$ 8,485,000
ii) Present Value of Future Member Contributions*	<u>2,469,007</u>
iii) Total Contributions to Employee Annuity Savings Fund	\$ 10,954,007
b. <u>Employer Annuity Accumulation Fund</u>	
i) Benefits Currently in Payment	\$ 48,125,747
ii) Benefits to be Paid to Current Active Members	<u>13,684,084</u>
iii) Total Benefits Payable from Employer Annuity Accumulation Fund	\$ 61,809,831
c. <u>Total Liabilities</u>	<u>\$ 72,763,838</u>

\*Includes future special contributors

---

## Actuarial Section

---

### Judges and Solicitors Retirement System Valuation Balance Sheet As of Actuarial Valuation at July 1, 2004

	<u>July 1, 2004</u>
<b>1. <u>Assets</u></b>	
a. <u>Current Assets (Actuarial Value)</u>	
i) Employee Annuity Savings Fund	\$ 17,640,000
ii) Employer Annuity Accumulation Fund	<u>94,376,000</u>
iii) Total Current Assets	\$ 112,016,000
b. <u>Present Value of Future Member Contributions</u>	\$ 10,997,679
c. <u>Present Value of Future Employer Contributions</u>	
i) Normal Contributions	\$ 15,757,738
ii) Accrued Liability Contributions	<u>73,035,872</u>
iii) Total Prospective Employer Contributions	\$ 88,793,610
d. <u>Total Assets</u>	<u><u>\$ 211,807,289</u></u>
<b>2. <u>Liabilities</u></b>	
a. <u>Employee Annuity Savings Fund</u>	
i) Past Member Contributions	\$ 17,640,000
ii) Present Value of Future Member Contributions	<u>10,997,679</u>
iii) Total Contributions to Employee Annuity Savings Fund	\$ 28,637,679
b. <u>Employer Annuity Accumulation Fund</u>	
i) Benefits Currently in Payment	\$ 106,158,806
ii) Benefits to be Paid to Current Active Members	<u>77,010,804</u>
iii) Total Benefits Payable from Employer Annuity Accumulation Fund	\$ 183,169,610
c. <u>Total Liabilities</u>	<u><u>\$ 211,807,289</u></u>

---

## Actuarial Section

---

### South Carolina Retirement System Results of the Valuation as of July 1, 2004 (Dollar amounts expressed in thousands)

July 1, 2004

**1. Actuarial Present Value of Future Benefits**

a. Present Retired Members and Beneficiaries	\$	14,184,765
b. Present Active and Inactive Members		<u>16,679,213</u>
c. Total Actuarial Present Value	\$	30,863,978

**2. Present Value of Future Normal Contributions**

a. Employee at 6.00%	\$	2,743,400
b. Employer at 3.80%		<u>2,142,726</u>
c. Total Future Normal Contributions	\$	4,886,126

**3. Actuarial Liability** \$ 25,977,852

**4. Current Actuarial Value of Assets** \$ 20,862,659

**5. Unfunded Actuarial Liability** \$ 5,115,193

**6. Unfunded Actuarial Liability Rates**

a. Active Members	3.75%
b. TERI Members	3.75%
c. ORP Members	2.55%
d. Reemployed Members	7.55%

**7. Unfunded Actuarial Liability Liquidation Period** 27 years

---

## Actuarial Section

---

### Police Officers Retirement System Results of the Valuation as of July 1, 2004 (Dollar amounts expressed in thousands)

	<u>July 1, 2004</u>
<b>1. <u>Actuarial Present Value of Future Benefits</u></b>	
a. Present Retired Members and Beneficiaries	\$ 1,415,627
b. Present Active and Inactive Members	<u>2,447,592</u>
c. Total Actuarial Present Value	\$ 3,863,219
<b>2. <u>Present Value of Future Normal Contributions</u></b>	
a. Employees	\$ 425,174
b. Employer	<u>453,461</u>
c. Total Future Normal Contributions	\$ 878,635
<b>3. <u>Actuarial Liability</u></b>	\$ 2,984,584
<b>4. <u>Current Actuarial Value of Assets</u></b>	\$ 2,616,835
<b>5. <u>Unfunded Actuarial Liability</u></b>	\$ 367,749
<b>6. <u>Unfunded Actuarial Liability Rates</u></b>	3.11%
<b>7. <u>Unfunded Actuarial Liability Liquidation Period</u></b>	16 years



---

## Actuarial Section

---

### General Assembly Retirement System Results of the Valuation as of July 1, 2004

	<u>July 1, 2004</u>
<b>1. <u>Actuarial Present Value of Future Benefits</u></b>	
a. Present Retired Members and Beneficiaries	\$ 48,125,747
b. Present Active and Inactive Members	<u>24,638,091</u>
c. Total Actuarial Present Value	\$ 72,763,838
<b>2. <u>Present Value of Future Normal Contributions</u></b>	
a. Employees	\$ 2,108,649
b. Special Contributors	360,358
c. Employer	<u>1,962,830</u>
d. Total Future Normal Contributions	\$ 4,431,837
<b>3. <u>Actuarial Liability</u></b>	\$ 68,332,001
<b>4. <u>Current Actuarial Value of Assets</u></b>	\$ 45,087,000
<b>5. <u>Unfunded Actuarial Liability</u></b>	\$ 23,245,001
<b>6. <u>Unfunded Actuarial Liability Liquidation Period</u></b>	23 years

---

## Actuarial Section

---

### Judges and Solicitors Retirement System Results of the Valuation as of July 1, 2004

	<u>July 1, 2004</u>
<b>1. <u>Actuarial Present Value of Future Benefits</u></b>	
a. Present Retired Members and Beneficiaries	\$ 106,158,806
b. Present Active and Inactive Members	<u>105,648,483</u>
c. Total Actuarial Present Value	\$ 211,807,289
<b>2. <u>Present Value of Future Normal Contributions</u></b>	
a. Employees	\$ 10,997,679
b. Employer	<u>15,757,738</u>
c. Total Future Normal Contributions	\$ 26,755,417
<b>3. <u>Actuarial Liability</u></b>	\$ 185,051,872
<b>4. <u>Current Actuarial Value of Assets</u></b>	\$ 112,016,000
<b>5. <u>Unfunded Actuarial Liability</u></b>	\$ 73,035,872
<b>6. <u>Unfunded Actuarial Liability Rates</u></b>	27.40%
<b>7. <u>Unfunded Actuarial Liability Liquidation Period</u></b>	28 years

## Actuarial Section

### South Carolina Retirement System Summary of Actuarial Assumptions and Methods

**1. Investment Return to be Earned by Fund**

7.25% per annum, compounded annually, composed of an assumed 3.00% inflation rate and a 4.25% real rate of return, net of investment and administrative expenses.

**2. Salary Increases**

Salary increases are assumed in accordance with the following representative rates:

Annual Increase			Annual Increase		
Years of Service	General Employees	Teachers	Years of Service	General Employees	Teachers
0	8.00%	8.00%	8	4.50%	4.75%
1	5.75%	8.00%	9	4.50%	4.75%
2	5.00%	5.50%	10	4.25%	4.75%
3	4.75%	5.25%	11	4.25%	4.50%
4	4.50%	5.00%	12	4.25%	4.40%
5	4.50%	5.00%	13	4.25%	4.40%
6	4.50%	5.00%	14	4.25%	4.40%
7	4.50%	4.75%	15+	4.00%	4.00%

**3. Decrement Rates**

a. Service Retirement

		Annual Rates of			
		Unreduced Service Retirement*		Reduced Service Retirement	
	Age	Male	Female	Male	Female
Employees	50	12%	14%		
	55	15%	18%	5%	10%
	60	20%	20%	5%	11%
	61	20%	20%	15%	15%
	62	30%	35%	27%	28%
	63	30%	30%	16%	20%
	64	30%	35%	22%	20%
	65	40%	40%		
	66	20%	25%		
	67	20%	25%		
	68	20%	25%		
	69	20%	25%		
	70	100%	100%		
Teachers	50	14%	15%		
	55	18%	25%	6%	9%
	60	25%	25%	14%	15%
	61	30%	40%	18%	20%
	62	20%	35%	25%	25%
	63	20%	25%	28%	20%
	64	35%	30%	28%	30%
	65	45%	40%		
	66	23%	23%		
	67	23%	23%		
	68	23%	23%		
	69	23%	23%		
	70	100%	100%		

## Actuarial Section

\*Plus the following percentage in the year when first become eligible for unreduced service retirement before age 65.

	<u>General Employees</u>	<u>Teachers</u>
Male	30%	40%
Female	45%	40%

b. In-Service Mortality and Disability

Annual Rates of								
Age	Mortality				Disability			
	<u>Employees</u>		<u>Teachers</u>		<u>Employees</u>		<u>Teachers</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	0.04%	0.01%	0.03%	0.01%	0.06%	0.05%	0.04%	0.05%
30	0.04%	0.02%	0.03%	0.01%	0.12%	0.07%	0.06%	0.07%
35	0.08%	0.03%	0.06%	0.03%	0.17%	0.15%	0.08%	0.07%
40	0.11%	0.05%	0.08%	0.04%	0.29%	0.19%	0.16%	0.13%
45	0.15%	0.07%	0.11%	0.06%	0.40%	0.27%	0.26%	0.26%
50	0.21%	0.11%	0.16%	0.09%	0.58%	0.46%	0.42%	0.42%
55	0.30%	0.16%	0.23%	0.14%	0.92%	0.74%	0.68%	0.68%
60	0.49%	0.26%	0.37%	0.22%	1.15%	1.12%	1.05%	1.05%
64	0.70%	0.35%	0.53%	0.30%	1.44%	1.56%	1.31%	1.31%

c. Withdrawal rates

Probability of Decrement Due to Withdrawal											
Years of Service - Male Teachers											
Age	0	1	2	3	4	5	6	7	8	9	10+
25	0.2964	0.2029	0.1384	0.0973	0.0721	0.0578	0.0513	0.0508	0.0518	0.0538	0.0560
30	0.2721	0.1922	0.1356	0.0990	0.0776	0.0662	0.0607	0.0577	0.0538	0.0477	0.0387
35	0.2531	0.1823	0.1316	0.0990	0.0805	0.0708	0.0657	0.0611	0.0540	0.0429	0.0273
40	0.2371	0.1730	0.1271	0.0979	0.0817	0.0730	0.0679	0.0619	0.0529	0.0390	0.0199
45	0.2239	0.1649	0.1228	0.0960	0.0811	0.0726	0.0669	0.0600	0.0503	0.0359	0.0167
50	0.2135	0.1587	0.1192	0.0936	0.0787	0.0698	0.0628	0.0553	0.0460	0.0335	0.0174
55	0.2063	0.1549	0.1168	0.0908	0.0742	0.0645	0.0557	0.0479	0.0401	0.0317	0.0222
60	0.1996	0.1518	0.1143	0.0865	0.0669	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Probability of Decrement Due to Withdrawal											
Years of Service - Female Teachers											
Age	0	1	2	3	4	5	6	7	8	9	10+
25	0.2299	0.1608	0.1209	0.1006	0.0892	0.0841	0.0827	0.0802	0.0731	0.0660	0.0601
30	0.2269	0.1664	0.1260	0.1015	0.0878	0.0802	0.0751	0.0696	0.0618	0.0527	0.0426
35	0.2171	0.1597	0.1208	0.0966	0.0830	0.0748	0.0682	0.0615	0.0536	0.0434	0.0303
40	0.2045	0.1477	0.1106	0.0885	0.0759	0.0683	0.0616	0.0551	0.0475	0.0368	0.0215
45	0.1930	0.1361	0.1001	0.0798	0.0685	0.0619	0.0561	0.0504	0.0435	0.0329	0.0163
50	0.1866	0.1296	0.0937	0.0738	0.0633	0.0570	0.0523	0.0478	0.0417	0.0317	0.0154
55	0.1879	0.1308	0.0935	0.0727	0.0626	0.0543	0.0509	0.0474	0.0420	0.0331	0.0190
60	0.1948	0.1379	0.0986	0.0758	0.0660	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

## Actuarial Section

### Probability of Decrement Due to Withdrawal

Years of Service - Male Employees											
Age	0	1	2	3	4	5	6	7	8	9	10+
25	0.3288	0.2466	0.1902	0.1554	0.1345	0.1166	0.0963	0.0783	0.0650	0.0595	0.0662
30	0.2939	0.2211	0.1726	0.1425	0.1236	0.1089	0.0951	0.0821	0.0704	0.0603	0.0530
35	0.2678	0.1997	0.1553	0.1285	0.1122	0.1010	0.0916	0.0822	0.0716	0.0586	0.0424
40	0.2456	0.1804	0.1384	0.1140	0.1002	0.0922	0.0861	0.0791	0.0695	0.0549	0.0335
45	0.2257	0.1636	0.1233	0.1003	0.0882	0.0825	0.0781	0.0727	0.0639	0.0493	0.0266
50	0.2082	0.1501	0.1115	0.0891	0.0774	0.0717	0.0675	0.0626	0.0547	0.0419	0.0224
55	0.1942	0.1410	0.1041	0.0814	0.0691	0.0600	0.0543	0.0488	0.0419	0.0328	0.0212
60	0.1827	0.1351	0.1002	0.0770	0.0632	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

### Probability of Decrement Due to Withdrawal

Years of Service - Female Employees											
Age	0	1	2	3	4	5	6	7	8	9	10+
25	0.2981	0.2459	0.2060	0.1772	0.1560	0.1385	0.1248	0.1159	0.1094	0.1030	0.0940
30	0.2710	0.2236	0.1864	0.1591	0.1395	0.1253	0.1145	0.1059	0.0970	0.0853	0.0688
35	0.2506	0.2015	0.1657	0.1410	0.1244	0.1130	0.1042	0.0958	0.0857	0.0712	0.0505
40	0.2329	0.1803	0.1451	0.1233	0.1101	0.1010	0.0935	0.0854	0.0748	0.0592	0.0367
45	0.2172	0.1622	0.1275	0.1080	0.0972	0.0894	0.0825	0.0746	0.0644	0.0493	0.0276
50	0.2041	0.1493	0.1151	0.0966	0.0864	0.0787	0.0715	0.0637	0.0543	0.0414	0.0234
55	0.1946	0.1429	0.1091	0.0895	0.0778	0.0688	0.0605	0.0526	0.0445	0.0353	0.0240
60	0.1873	0.1412	0.1079	0.0855	0.0701	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Note: No probability of withdrawal is applied to members eligible to retire.

#### 4. Mortality After Retirement

For healthy retirees and beneficiaries, the UP-94 Mortality Table rates is used, with the female rates set back one year. A separate table of mortality rates is used for disabled retirees. The following are sample rates:

Age	Healthy		Disabled	
	Male	Female	Male	Female
50	0.28%	0.14%	3.06%	2.31%
55	0.48%	0.22%	3.86%	2.66%
60	0.86%	0.42%	4.82%	2.98%
65	1.56%	0.82%	5.42%	3.33%
70	2.55%	1.37%	5.91%	3.70%
75	4.00%	2.19%	6.74%	4.43%
80	6.67%	3.80%	9.02%	6.71%
85	10.46%	6.56%	13.45%	10.15%

#### 5. Marriage Assumption

100% of all active members are assumed to be married, with female spouses being 3 years younger.

#### 6. Asset Valuation Method

The actuarial value of assets is equal to the market value of assets less a five-year phase in of the excess (shortfall) between expected investment return and actual net income (both based on market value) with the resulting value not being less than 80% or more than 120% of the market value of assets.

### 7. Cost Methods

#### a. Normal Retirement, Termination, Death and Disability Benefits

The contribution rate is set by statute for employees and by the South Carolina Budget and Control Board for the employers. The funding period is determined, as described below, using the Entry Age Normal actuarial cost method.

The Entry Age Normal actuarial cost method assigns the plan's total unfunded liabilities (the actuarial present value of future benefits less the actuarial value of assets) to various periods. The unfunded actuarial liability is assigned to years prior to the valuation, and the normal cost is assigned to the year following the valuation. The remaining costs are the normal costs for future years. Then each year's contribution is composed of (i) that year's normal cost, plus (ii) a payment used to reduce the unfunded actuarial liability.

The normal cost is the level (as a percentage of pay) contribution required to fund the benefits for all current members. Part of the normal cost is paid from the employees' own contributions. The employers pay the balance from their contributions. The method used for this valuation sets the present value of future normal costs that are to be paid by the employees as 6% of their present value of future earnings.

The actuarial liability is the difference between the total present value of future benefits and the actuarial present value of future normal costs. The unfunded actuarial liability is the excess of the actuarial liability over the actuarial value of assets.

The balance of the employers' contributions – the remainder after paying their share of the normal cost – is used to reduce the unfunded actuarial liability. The funding period is the length of time required for the unfunded actuarial liability to be completely amortized, assuming that the portion used to reduce the unfunded liability remains level as a percentage of total payroll, which is assumed to grow 4.00% per year.

The calculation of the funding period reflects additional contributions the System receives with respect to both ORP participants and return to work retirees. These contributions are assumed to grow at the same payroll growth rate as for active SCRS employees.

It is assumed that amortization payments are made monthly at the end of the month.

#### b. Group Life Insurance Benefit

One-year term cost method.

### 8. Unused Annual Leave

To account for the effect of unused annual leave on Average Final Compensation, liabilities for active members are increased 2.50%.

### 9. Unused Sick Leave

To account for the effect of unused sick leave on members' final credited service, the service of active members who retire is increased 3 months.

### 10. Future Cost-of-Living Increases

None assumed.

### 11. Administrative and Investment Expenses

The investment return assumption represents the expected return net of all administrative and investment expenses.



---

## Actuarial Section

---

**12. Payroll Growth Rate**

4.00% per annum.

**13. Valuation of Teachers and Employees Retention Incentive (TERI)**

We have assumed 80% of all members elect TERI coverage when they are first eligible for an unreduced retirement benefit before age 65. We assume members in the TERI are exposed to adjusted retirement rates during TERI coverage and we assume 100% terminate employment at the end of the TERI period (5 years). The retirement rate is adjusted by the following schedule based on number of years since entering TERI:

<u>Years Since Entering TERI Program</u>	<u>Multiple of Unreduced Retirement Table</u>
0.00 - 0.99	50%
1.00 - 1.99	65%
2.00 - 2.99	80%
3.00 - 3.99	90%
4.00 - 4.99	100%
5.00	All members assumed to retire immediately

**14. Changes from Prior Valuation**

In the prior valuation, the normal cost was determined as the level (as a percentage of pay) contribution required to fund the benefits for a **new member**. This was determined based upon a hypothetical group of new entrants. This group was based on the age-pay-sex distribution of new members joining SCRS during the six-year period ending July 1, 2003.

**15. Adoption Date**

The current actuarial assumptions and methods were adopted by the State Budget and Control Board on April 20, 2004.

---

## Actuarial Section

---

### South Carolina Retirement System Development of Actuarial Value of Assets (Amounts expressed in thousands)

Item	Valuation as of July 1, 2004
1. Excess (Shortfall) of Investment Income for Current Year and Previous Three Years:	
a. Current Year	\$ 330,912
b. Current Year - 1	319,064
c. Current Year - 2	(1,179,755)
d. Current Year - 3	16,019
2. Deferral of Excess (Shortfall) of Investment Income for:	
a. Current Year (80% Deferral)	\$ 264,730
b. Current Year - 1 (60% Deferral)	191,438
c. Current Year - 2 (40% Deferral)	(471,902)
d. Current Year - 3 (20% Deferral)	3,204
e. Total Deferred for Year	<u>\$ (12,530)</u>
3. Market Value of Plan Assets, End of Year	\$ 20,850,129
4. Preliminary Actuarial Value of Plan Assets, End of Year (Item 3 - Item 2.e.)	\$ 20,862,659
5. Actuarial Value of Assets Corridor	
a. 80% of Market Value of Assets, End of Year	\$ 16,680,103
b. 120% of Market Value of Assets, End of Year	\$ 25,020,155
6. Final Actuarial Value of Plan Assets, End of Year (Item 4., But Not Less Than Item 5.a., or Greater Than Item 5.b.)	\$ 20,862,659

### Police Officers Retirement System Summary of Actuarial Assumptions and Methods

**1. Investment Return to be Earned by Fund**

7.25% per annum, compounded annually, composed of an assumed 3.00% inflation rate and a 4.25% real rate of return, net of investment and administrative expenses.

**2. Salary Increases**

Salary increases are assumed in accordance with the following representative rates:

<u>Years of Service</u>	<u>Annual Increase</u>	<u>Years of Service</u>	<u>Annual Increase</u>
0	11.50%	8	4.75%
1	6.75%	9	4.75%
2	5.75%	10	4.75%
3	5.50%	11	4.75%
4	5.25%	12	4.50%
5	5.00%	13	4.50%
6	4.75%	14	4.50%
7	4.75%	15+	4.50%

**3. Decrement Rates**

The following are representative values of the assumed annual rates of withdrawal, inservice mortality, disability, and service retirement.

<u>Age</u>	<u>Annual Rates of</u>		
	<u>Service Retirement*</u>	<u>Mortality</u>	<u>Disability</u>
20		0.03%	0.12%
25		0.03%	0.14%
30		0.04%	0.18%
35		0.07%	0.35%
40		0.10%	0.46%
45	20.00%	0.14%	0.69%
50	20.00%	0.19%	0.86%
55	14.00%	0.27%	
60	15.00%	0.44%	
64	25.00%	0.63%	

\*Plus an additional 22% for participants under age 55 in year when first eligible for unreduced service retirement.

All employees are assumed to retire at age 65. In addition, 25% of disabilities are assumed to be duty related, and 5% of pre-retirement deaths are assumed to be accidental (duty-related).

## Actuarial Section

### Probability of Decrement Due to Withdrawal

Age	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
25	0.2494	0.1816	0.1342	0.1047	0.0885	0.0780	0.0715	0.0640	0.0545	0.0524	0.0618
30	0.2478	0.1822	0.1376	0.1107	0.0959	0.0876	0.0810	0.0732	0.0633	0.0545	0.0481
35	0.2450	0.1795	0.1359	0.1104	0.0967	0.0899	0.0837	0.0763	0.0665	0.0539	0.0381
40	0.2398	0.1739	0.1304	0.1055	0.0927	0.0868	0.0814	0.0747	0.0653	0.0510	0.0305
45	0.2312	0.1649	0.1212	0.0964	0.0845	0.0783	0.0738	0.0681	0.0595	0.0458	0.0256
50	0.2193	0.1532	0.1090	0.0839	0.0730	0.0646	0.0610	0.0564	0.0490	0.0382	0.0236
55	0.2050	0.1393	0.0944	0.0684	0.0587						
60	0.1871	0.1228	0.0773	0.0503	0.0419						

Note: No probability of withdrawal is applied to members eligible to retire.

#### 4. Mortality After Retirement

For healthy retirees and beneficiaries, the UP-94 Mortality Table rates is used, with female rates set back one year and male rates set forward three years. A separate table of mortality rates is used for disabled retirees. The following are sample rates for the retirees and beneficiaries:

Age	Healthy		Disabled
	Male	Female	All
50	0.39%	0.14%	2.30%
55	0.68%	0.22%	2.89%
60	1.23%	0.42%	3.62%
65	2.14%	0.82%	4.07%
70	3.35%	1.37%	4.43%
75	5.40%	2.19%	5.05%
80	8.87%	3.80%	6.77%
85	13.65%	6.56%	10.09%

#### 5. Marriage Assumption

100% of all active members are assumed to be married, with female spouses being 4 years younger.

#### 6. Asset Valuation Method

The actuarial value of assets is equal to the market value of assets less a five-year phase in of the excess (shortfall) between expected investment return and actual net income (both based on market value) with the resulting value not being less than 80% or more than 120% of the market value of assets.

#### 7. Cost Methods

##### a. Normal Retirement, Termination, Death and Disability Benefits

Projected benefit method with level percentage entry age normal cost. Gains and losses are reflected in the period remaining to liquidate the unfunded actuarial liability. We completed a separate valuation of the accidental (duty-related) death benefit.

##### b. Group Life Insurance Benefit and Accidental Death Benefits

One-year term cost method.

#### 8. Unused Annual Leave

To account for the effect of unused annual leave on Average Final Compensation, liabilities for active members are increased 3.75%.

#### 9. Unused Sick Leave

To account for the effect of unused sick leave on members' final credited service, the service of active members who retire is increased 3 months.

## Actuarial Section

---

**10. Future Cost-of-Living Increases**

None assumed.

**11. Administrative and Investment Expenses**

The investment return assumption represents the expected return net of all administrative and investment expenses.

**12. Payroll Growth Rate**

4.00% per annum.

**13. Change from Prior Valuation**

There was a change in the application of the actuarial calculation methods as a result of the change in actuaries. The change is discussed in the parallel valuation prepared as of July 1, 2003.

**14. Adoption Date**

The current actuarial assumptions and methods were adopted by the State Budget and Control Board on April 20, 2004.

### Police Officers Retirement System Development of Actuarial Value of Assets *(Amounts expressed in thousands)*

Item (1)	Valuation as of July 1, 2004 (2)
1. Excess (Shortfall) of Investment Income for Current Year and Previous Three Years:	
a. Current Year	\$ 31,828
b. Current Year - 1	57,490
c. Current Year - 2	(143,238)
d. Current Year - 3	(1,635)
2. Deferral of Excess (Shortfall) of Investment Income for:	
a. Current Year (80% Deferral)	\$ 25,462
b. Current Year - 1 (60% Deferral)	34,494
c. Current Year - 2 (40% Deferral)	(57,295)
d. Current Year - 3 (20% Deferral)	(327)
e. Total Deferred for Year	\$ 2,334
3. Market Value of Plan Assets, End of Year	\$ 2,619,169
4. Preliminary Actuarial Value of Plan Assets, End of Year (Item 3 - Item 2.e.)	\$ 2,616,835
5. Actuarial Value of Assets Corridor	
a. 80% of Market Value of Assets, End of Year	\$ 2,095,335
b. 120% of Market Value of Assets, End of Year	\$ 3,143,003
6. Final Actuarial Value of Plan Assets, End of Year (Item 4., But Not Less Than Item 5.a., or Greater Than Item 5.b.)	\$ 2,616,835

**General Assembly Retirement System**  
**Summary of Actuarial Assumptions and Methods**

**1. Investment Return to be Earned by Fund**

7.25% per annum, compounded annually, composed of an assumed 3.00% inflation rate and a 4.25% real rate of return, net of investment and administrative expenses.

**2. Salary Increases**

None assumed.

**3. Decrement Rates**

The following are representative values of the assumed annual rates of in-service mortality, disability, and service retirement. No withdrawals are assumed. All members who are not re-elected are assumed to continue paying the member rate as a special contributor.

a. Unreduced Service Retirement

<u>Age</u>	<u>Rates of Retirement</u>
60 & under	40%
61	7%
62	7%
63	7%
64	7%
65	15%
66	15%
67	15%
68	15%
69	15%
70 & older	100%

In addition, members with 30 years of service are assumed to commence benefit payments immediately even if they do not terminate employment.

b. In-service Mortality and Disability

<u>Age</u>	<u>Annual Rates of</u>			
	<u>Mortality</u>		<u>Disability</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	0.04%	0.01%	0.06%	0.05%
30	0.04%	0.02%	0.12%	0.07%
35	0.08%	0.03%	0.17%	0.15%
40	0.11%	0.05%	0.29%	0.19%
45	0.15%	0.07%	0.40%	0.27%
50	0.21%	0.11%	0.58%	0.46%
55	0.30%	0.16%	0.92%	0.74%
60	0.49%	0.26%	1.15%	1.12%
64	0.70%	0.35%	1.44%	1.56%



### 4. Mortality After Retirement

For healthy retirees and beneficiaries, the UP-94 Mortality Table rates, with the female rates set back one year. A separate table of mortality rates is used for disabled retirees. The following are sample rates:

Age	Healthy		Disabled	
	Male	Female	Male	Female
50	0.28%	0.14%	3.06%	2.31%
55	0.48%	0.22%	3.86%	2.66%
60	0.86%	0.42%	4.82%	2.98%
65	1.56%	0.82%	5.42%	3.33%
70	2.55%	1.37%	5.91%	3.70%
75	4.00%	2.19%	6.74%	4.43%
80	6.67%	3.80%	9.02%	6.71%
85	10.46%	6.56%	13.45%	10.15%

### 5. Marriage Assumption

100% of all active and special contributor members are assumed to be married, with female spouses being 4 years younger.

### 6. Asset Valuation Method

The actuarial value of assets is equal to the market value of assets less a five-year phase in of the excess (shortfall) between expected investment return and actual net income (both based on market value) with the resulting value not being less than 80% or more than 120% of the market value of assets.

### 7. Cost Method

Projected benefit method with level percentage entry age normal cost and close-end unfunded actuarial accrued liability. Gains and losses are amortized over the closed period.

### 8. Cost-of-Living Increases

None assumed.

### 9. Payroll Growth Rate

None assumed.

### 10. Administrative and Investment Expenses

The investment return assumption represents the expected return net of all administrative and investment expenses.

### 11. Changes from Prior Valuation

There was a change in the application of the actuarial calculation methods as a result of the change in actuaries. The change is discussed in the parallel valuation prepared as of July 1, 2003. In addition, we used the entry age normal cost method to value the group life insurance benefit. A one year term cost method was used in the prior valuation.

### 12. Adoption Date

The current actuarial assumptions and methods were adopted by the State Budget and Control Board on May 4, 2004.

---

## Actuarial Section

---

### General Assembly Retirement System Development of Actuarial Value of Assets (Amounts expressed in thousands)

Item	Valuation as of July 1, 2004
(1)	(2)
1. Excess (Shortfall) of Investment Income for Current Year and Previous Three Years:	
a. Current Year	\$ 927
b. Current Year - 1	1,068
c. Current Year - 2	(3,065)
d. Current Year - 3	61
2. Deferral of Excess (Shortfall) of Investment Income for:	
a. Current Year (80% Deferral)	\$ 742
b. Current Year - 1 (60% Deferral)	641
c. Current Year - 2 (40% Deferral)	(1,226)
d. Current Year - 3 (20% Deferral)	12
e. Total Deferred for Year	<u>\$ 169</u>
3. Market Value of Plan Assets, End of Year	\$ 45,256
4. Preliminary Actuarial Value of Plan Assets, End of Year (Item 3 - Item 2.e.)	\$ 45,087
5. Actuarial Value of Assets Corridor	
a. 80% of Market Value of Assets, End of Year	\$ 36,205
b. 120% of Market Value of Assets, End of Year	\$ 54,307
6. Final Actuarial Value of Plan Assets, End of Year (Item 4., But Not Less Than Item 5.a., or Greater Than Item 5.b.)	\$ 45,087

**Judges and Solicitors Retirement System**  
**Summary of Actuarial Assumptions and Methods**

**1. Investment Return to be Earned by Fund**

7.25% per annum, compounded annually, composed of an assumed 3.00% inflation rate and a 4.25% real rate of return, net of investment and administrative expenses.

**2. Salary Increases**

3.25% per annum, compounded annually.

**3. Disability and Pre-retirement Mortality Rates**

The following are representative values of the assumed annual rates of disability and pre-retirement death.

<u>Age</u>	<u>Annual Rates of</u>			
	<u>Mortality</u>		<u>Disability</u>	
	<u>Employees</u>		<u>Employees</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	0.06%	0.03%	0.04%	0.05%
30	0.07%	0.04%	0.06%	0.07%
35	0.07%	0.04%	0.08%	0.07%
40	0.10%	0.05%	0.15%	0.12%
45	0.18%	0.08%	0.25%	0.25%
50	0.30%	0.13%	0.40%	0.40%
55	0.46%	0.21%	0.65%	0.65%
60	0.65%	0.33%	1.00%	1.00%
64	0.99%	0.54%	1.25%	1.25%

No in-service withdrawals are assumed.

**4. Mortality After Retirement**

For healthy retirees and beneficiaries, the 1983 Group Annuity Mortality Table rates. A separate table of mortality rates is used for disabled retirees. The following are sample rates for the healthy retirees and beneficiaries:

<u>Age</u>	<u>Male</u>	<u>Female</u>
60	0.92%	0.42%
65	1.56%	0.71%
70	2.75%	1.24%
75	4.46%	2.40%
80	7.41%	4.29%
85	11.48%	6.99%

**5. Normal Retirement Assumption**

Upon meeting the retirement eligibility requirement, participants are assumed to retire in the following manner:

Before age 65,

<u>Year Eligible</u>	<u>Retirement Rate</u>
1st	40%
2nd	25%
3rd and after	12%

## Actuarial Section

---

After age 65,

<u>Age</u>	<u>Portion Retiring</u>
Under 72	12%
72 & over	100%

6. **Marriage Assumption**

95% of all active members are assumed to be married with female spouses being 3 years younger.

7. **Asset Valuation Method**

The actuarial value of assets is equal to the market value of assets less a five-year phase in of the excess (shortfall) between expected investment return and actual net income (both based on market value) with the resulting value not being less than 80% or more than 120% of the market value of assets.

8. **Cost Methods**

Projected benefit method with level percentage entry age normal cost. Gains and losses are reflected in the period remaining to liquidate the unfunded actuarial accrued liability.

9. **Cost-of-Living Increases**

3.25% per annum.

10. **Administrative and Investment Expenses**

The investment return assumption represents the expected return net of all administrative and investment expenses.

11. **Payroll Growth Rate**

3.25% per annum.

12. **Changes from Prior Valuation**

There was a change in the application of the actuarial calculation methods as a result of the change in actuaries. The change is discussed in the parallel valuation prepared as of July 1, 2003. In addition, we used the entry age normal cost method to value the group life insurance benefit. A one year term cost method was used in the prior valuation.

13. **Adoption Date**

The current actuarial assumptions and methods were adopted by the State Budget and Control Board on April 20, 2004.

---

## Actuarial Section

---

### Judges and Solicitors Retirement System Development of Actuarial Value of Assets *(Amounts expressed in thousands)*

Item	Valuation as of July 1, 2004
1. Excess (Shortfall) of Investment Income for Current Year and Previous Three Years:	
a. Current Year	\$ 1,619
b. Current Year - 1	1,878
c. Current Year - 2	(5,959)
d. Current Year - 3	658
2. Deferral of Excess (Shortfall) of Investment Income for:	
a. Current Year (80% Deferral)	\$ 1,295
b. Current Year - 1 (60% Deferral)	1,127
c. Current Year - 2 (40% Deferral)	(2,384)
d. Current Year - 3 (20% Deferral)	132
e. Total Deferred for Year	<u>\$ 170</u>
3. Market Value of Plan Assets, End of Year	\$ 112,186
4. Preliminary Actuarial Value of Plan Assets, End of Year (Item 3 - Item 2.e.)	\$ 112,016
5. Actuarial Value of Assets Corridor	
a. 80% of Market Value of Assets, End of Year	\$ 89,749
b. 120% of Market Value of Assets, End of Year	\$ 134,623
6. Final Actuarial Value of Plan Assets, End of Year (Item 4., But Not Less Than Item 5.a., or Greater Than Item 5.b.)	\$ 112,016

---

## Actuarial Section

---

### South Carolina Retirement System Schedule of Active Member Valuation Data\* As of July 1, 2004

Valuation Date	Number of Employers	Number of Active Members	Annual Payroll (in thousands)	Annual Average Pay	Percentage Increase In Average Pay
7-01-04	763	181,827	\$ 6,180,599	\$ 33,992	1.06%
7-01-03	763	185,538	6,240,768	33,636	3.50%
7-01-02	746	189,166	6,147,712	32,499	3.42%
7-01-01	739	191,494	6,017,537	31,424	5.15%
7-01-00	729	196,825	5,881,847	29,884	5.49%
7-01-99	726	193,213	5,473,759	28,330	3.83%
7-01-98	720	190,259	5,191,048	27,284	2.78%
7-01-97	725	185,597	4,927,124	26,547	4.40%
7-01-96	713	178,540	4,540,100	25,429	3.28%
7-01-95	718	175,410	4,318,800	24,621	4.80%

\*Does not include Teacher and Employee Retention Incentive (TERI) participants.

### Police Officers Retirement System Schedule of Active Member Valuation Data As of July 1, 2004

Valuation Date	Number of Employers	Number of Active Members	Annual Payroll (in thousands)	Annual Average Pay	Percentage Increase In Average Pay
7-01-04	314	23,734	\$ 822,448	\$ 34,653	3.35%
7-01-03	314	23,871	800,394	33,530	6.08%
7-01-02	302	23,963	757,393	31,607	3.59%
7-01-01	296	24,821	757,335	30,512	5.50%
7-01-00	297	24,782	716,749	28,922	4.82%
7-01-99	307	23,127	638,086	27,591	4.11%
7-01-98	301	22,883	606,426	26,501	2.83%
7-01-97	297	21,829	562,553	25,771	4.31%
7-01-96	291	20,461	505,516	24,706	2.20%
7-01-95	280	19,657	475,176	24,173	5.11%



## Actuarial Section

---

### General Assembly Retirement System Schedule of Active Member Valuation Data\* As of July 1, 2004

Valuation Date	Number of Employers	Number of Active Members*	Annual Payroll (in thousands)	Annual Average Pay	Percentage Increase In Average Pay
7-01-04	2	170	\$ 3,839	\$ 22,582	(0.13%)
7-01-03	2	170	3,844	22,612	0.17%
7-01-02	2	200	4,515	22,573	(0.91%)
7-01-01	2	209	4,761	22,781	(0.12%)
7-01-00	2	213	4,858	22,808	0.31%
7-01-99	2	219	4,979	22,737	(0.26%)
7-01-98	2	211	4,810	22,797	0.00%
7-01-97	2	207	4,721	22,800	1.79%
7-01-96	2	213	4,772	22,400	0.00%
7-01-95	2	210	4,704	22,400	0.00%

\*Beginning July 1, 2003, does not include special contributors.

### Judges and Solicitors Retirement System Schedule of Active Member Valuation Data As of July 1, 2004

Valuation Date	Number of Employers	Number of Active Members	Annual Payroll (in thousands)	Annual Average Pay	Percentage Increase In Average Pay
7-01-04	2	128	\$ 14,870	\$ 116,172	3.00%
7-01-03	2	128	14,437	112,789	1.59%
7-01-02	2	128	14,211	111,026	0.73%
7-01-01	2	128	14,109	110,223	4.26%
7-01-00	2	125	13,214	105,715	4.49%
7-01-99	2	126	12,748	101,174	4.99%
7-01-98	2	120	11,564	96,363	3.05%
7-01-97	2	120	11,221	93,508	6.38%
7-01-96	2	115	10,109	87,904	0.81%
7-01-95	2	108	9,417	87,194	5.13%

---

## Actuarial Section

---

### South Carolina Retirement System The Number and Earnable Compensation of Active Members As of July 1, 2004 (Dollar amounts expressed in thousands)

<u>GROUP</u>	<u>NUMBER</u>	<u>ANNUAL COMPENSATION</u>
State Employees	54,367	\$ 1,990,543
Teachers	79,665	2,681,269
Other	47,795	1,508,787
Total	181,827	\$ 6,180,599

Note: In addition, there are 146,718 inactive members with contributions still in the System. The results of the valuation were adjusted to take these members into account.

### Police Officers Retirement System The Number and Earnable Compensation of Active Members As of July 1, 2004 (Dollar amounts expressed in thousands)

<u>NUMBER</u>	<u>ANNUAL COMPENSATION</u>
23,734	\$ 822,448

Note: In addition, there are 9,597 inactive members contributions still in the System. The results of the valuation were adjusted to take these members into account.

---

## Actuarial Section

---

**General Assembly Retirement System**  
**The Number and Earnable Compensation of Active Members**  
**As of July 1, 2004**  
*(Dollar amounts expressed in thousands)*

<u>NUMBER</u>	<u>ANNUAL COMPENSATION</u>
170	\$ 3,839

Note: There are 57 inactive members with contributions still in the System, and there are 39 special contributors. The results of the valuation were adjusted to take these members into account. Numbers shown above do not include open seats or members receiving retirement benefits while continuing in office.

**Judges and Solicitors Retirement System**  
**The Number and Earnable Compensation of Active Members**  
**As of July 1, 2004**  
*(Dollar amounts expressed in thousands)*

<u>NUMBER</u>	<u>ANNUAL COMPENSATION</u>
128	\$ 14,870

Note: There are three inactive members with contributions still in the System. The results of the valuation were adjusted to take these members into account. Numbers above were not adjusted for open seats.

---

## Actuarial Section

---

**South Carolina Retirement System**  
**The Number and Annual Retirement Allowances of**  
**Retired Members and Beneficiaries\***  
**As of July 1, 2004**  
*(Dollar amounts expressed in thousands)*

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES
<b>Service Retirements:</b>		
Employees:		
Men	17,772	\$ 369,994
Women	19,290	277,026
Total	37,062	647,020
Teachers:		
Men	7,251	165,845
Women	28,936	483,400
Total	36,187	649,245
<b>Disability Retirements:</b>		
Employees:		
Men	2,730	30,861
Women	3,187	32,987
Total	5,917	63,848
Teachers:		
Men	788	10,005
Women	3,114	34,911
Total	3,902	44,916
<b>Beneficiaries of Deceased Retired Members and Active Members:</b>		
Men	1,718	11,239
Women	4,821	49,938
Total	6,539	61,177
Grand Total	89,607	\$ 1,466,206

\*Includes Teacher and Employee Retention Incentive (TERI) participants.

---

## Actuarial Section

---

### Police Officers Retirement System The Number and Annual Retirement Allowances of Retired Members and Beneficiaries

As of July 1, 2004

*(Dollar amounts expressed in thousands)*

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES
<b>Service Retirements:</b>		
Men	5,823	\$ 104,560
Women	948	10,771
Total	6,771	115,331
<b>Disability Retirements:</b>		
Men	1,083	18,520
Women	273	3,283
Total	1,356	21,803
<b>Beneficiaries:</b>		
Men	29	236
Women	900	8,977
Total	929	9,213
Grand Total	9,056	\$ 146,347

## Actuarial Section

---

### General Assembly Retirement System The Number and Annual Retirement Allowances of Beneficiaries and Contingent Beneficiaries

As of July 1, 2004

(Dollar amounts expressed in thousands)

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES
<b>Service Retirements:</b>		
Men	209	\$ 3,886
Women	21	409
Total	230	4,295
<b>Disability Retirements:</b>		
Men	1	15
Women	0	0
Total	1	15
<b>Beneficiaries:</b>		
Men	0	0
Women	66	1,043
Total	66	1,043
Grand Total	297	\$ 5,353

### Judges and Solicitors Retirement System The Number and Annual Retirement Allowances of Beneficiaries and Contingent Beneficiaries

As of July 1, 2004

(Dollar amounts expressed in thousands)

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES
<b>Service Retirements:</b>		
Men	94	\$ 7,716
Women	1	81
Total	95	7,797
<b>Disability Retirements:</b>		
Men	1	83
Women	0	0
Total	1	83
<b>Beneficiaries of Deceased Members:</b>		
Men	12	272
Women	31	909
Total	43	1,181
Grand Total	139	\$ 9,061



## Actuarial Section

### South Carolina Retirement System Schedule of Retirants Added to and Removed from Rolls\* (Dollar amounts except average allowance expressed in thousands)

Year Ended	Added to Rolls		Removed from Rolls		Rolls End of the Year		% Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
7-01-04	7,319	\$ 151,477	2,132	\$ 22,656	89,607	\$ 1,466,206	9.6%	\$ 16,363
7-01-03	7,866	163,867	2,510	27,662	84,420	1,337,385	11.3%	15,842
7-01-02	7,344	140,077	2,334	24,531	79,064	1,201,180	10.6%	15,193
7-01-01	12,523	284,739	2,474	23,735	74,054	1,085,634	31.7%	14,660
7-01-00	4,772	93,459	1,830	17,139	64,005	824,630	10.2%	12,884
7-01-99	4,961	68,522	2,436	12,175	61,063	748,310	8.1%	12,255
7-01-98	4,580	61,751	2,169	13,592	58,538	691,963	7.5%	11,321
7-01-97	4,601	78,201	2,346	10,928	56,127	643,804	11.7%	11,470
7-01-96	3,368	49,605	1,572	11,383	53,872	576,531	7.1%	10,702
7-01-95	4,153	58,435	1,399	9,970	52,076	538,289	9.9%	10,337

\*Includes Teacher and Employee Retention Incentive (TERI) participants.

### Police Officers Retirement System Schedule of Retirants Added to and Removed from Rolls (Dollar amounts except average allowance expressed in thousands)

Year Ended	Added to Rolls		Removed from Rolls		Rolls End of the Year		% Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
7-01-04	894	\$ 16,256	265	\$ 2,923	9,056	\$ 146,348	10.8%	\$ 16,114
7-01-03	947	18,614	226	2,733	8,427	133,015	13.6%	15,784
7-01-02	956	17,378	220	2,639	7,706	117,134	14.4%	15,200
7-01-01	989	17,235	341	3,986	6,970	102,395	14.9%	14,691
7-01-00	549	9,979	152	1,581	6,322	89,146	10.4%	14,101
7-01-99	606	8,490	238	1,731	5,925	80,748	9.1%	13,628
7-01-98	492	6,924	154	1,085	5,557	73,989	8.6%	13,315
7-01-97	533	9,024	176	759	5,219	68,150	13.8%	13,058
7-01-96	415	5,866	100	791	4,862	59,885	9.3%	12,317
7-01-95	504	9,404	90	768	4,547	54,810	18.7%	12,054

## Actuarial Section

### General Assembly Retirement System Schedule of Retirants Added to and Removed from Rolls (Dollar amounts except average allowance expressed in thousands)

Year Ended	Added to Rolls		Removed from Rolls		Rolls End of the Year		% Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
7-01-04	12	\$ 185	9	\$ 119	297	\$ 5,353	1.2%	\$ 18,023
7-01-03	40	839	12	226	294	5,287	13.1%	17,983
7-01-02	24	453	9	160	266	4,674	6.7%	17,571
7-01-01	27	609	11	204	251	4,381	10.2%	17,454
7-01-00	8	118	7	110	235	3,976	0.2%	16,919
7-01-99	16	257	6	62	234	3,968	5.2%	16,957
7-01-98	9	125	6	159	224	3,773	(0.9%)	16,844
7-01-97	18	233	4	92	221	3,807	3.8%	17,226
7-01-96	6	159	4	43	207	3,666	3.3%	17,710
7-01-95	24	1,567	2	27	205	3,550	76.6%	17,317

### Judges and Solicitors Retirement System Schedule of Retirants Added to and Removed from Rolls (Dollar amounts except average allowance expressed in thousands)

Year Ended	Added to Rolls		Removed from Rolls		Rolls End of the Year		% Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
7-01-04	11	\$ 925	2	\$ 139	139	\$ 9,061	9.5%	\$ 65,190
7-01-03	11	716	7	493	130	8,275	2.8%	63,654
7-01-02	13	706	5	248	126	8,052	6.0%	63,905
7-01-01	9	685	6	442	118	7,594	3.3%	64,356
7-01-00	7	772	4	276	115	7,351	7.2%	63,926
7-01-99	9	598	3	209	112	6,855	6.0%	61,205
7-01-98	8	812	3	198	106	6,466	10.5%	60,996
7-01-97	4	746	4	187	101	5,852	10.6%	57,941
7-01-96	7	1,014	0	0	101	5,293	11.9%	52,406
7-01-95	8	802	1	63	94	4,729	18.5%	50,309

## Actuarial Section

### Summary of Accrued and Unfunded Accrued Liabilities (Dollar amounts expressed in thousands)

	Valuation Date	Valuation Assets	Aggregate Accrued Liabilities	Actuarial Assets as a % of Actuarial Accrued Liabilities	Unfunded Accrued Liabilities	Annual Active Member Payroll	UAL as a % of Active Member Payroll
SCRS	7-01-04	\$20,862,659	\$25,977,852	80.3%	\$ 5,115,193	\$ 6,180,599	82.8%
	7-01-03	20,197,936	24,398,931	82.8%	4,200,995	6,240,768	67.3%
	7-01-02	19,298,174	22,446,574	86.0%	3,148,400	6,147,712	51.2%
	7-01-01	18,486,773	21,162,147	87.4%	2,675,374	6,017,537	44.5%
	7-01-00	17,286,108	19,414,972	89.0%	2,128,864	5,881,847	36.2%
	7-01-99	16,120,513	16,298,438	98.9%	177,925	5,473,759	3.3%
	7-01-98	14,946,070	15,952,345	93.7%	1,006,275	5,191,048	19.4%
	7-01-97	13,621,362	14,977,179	90.9%	1,355,817	4,927,124	27.5%
	7-01-96	12,499,235	14,062,092	88.9%	1,562,857	4,540,100	34.4%
	7-01-95	11,453,462	12,980,497	88.2%	1,527,035	4,318,827	35.4%
	Valuation Date	Valuation Assets	Aggregate Accrued Liabilities	Actuarial Assets as a % of Actuarial Accrued Liabilities	Unfunded Accrued Liabilities	Annual Active Member Payroll	UAL as a % of Active Member Payroll
PORS	7-01-04	\$ 2,616,835	\$ 2,984,584	87.7%	\$ 367,749	\$ 822,448	44.7%
	7-01-03	2,511,369	2,744,849	91.5%	233,480	800,394	29.2%
	7-01-02	2,351,100	2,527,876	93.0%	176,776	757,393	23.3%
	7-01-01	2,197,982	2,324,257	94.6%	126,275	757,335	16.7%
	7-01-00	2,008,554	2,095,991	95.8%	87,437	716,749	12.2%
	7-01-99	1,844,517	1,898,237	97.2%	53,720	638,086	8.4%
	7-01-98	1,684,641	1,733,578	97.2%	48,937	606,426	8.1%
	7-01-97	1,512,390	1,570,816	96.3%	58,426	562,553	10.4%
	7-01-96	1,367,549	1,427,785	95.8%	60,236	505,516	11.9%
	7-01-95	1,236,610	1,299,119	95.2%	62,509	475,176	13.2%

Note: Effective 7-1-1995, actuarial assumptions were changed as a result of a 5 year experience study, the investment return assumption was changed from 8% to 7.25%, an assumption of future COLA adjustments was removed (SCRS and PORS) and the method of valuing assets was changed from book value to a smoothed market value.

Effective 7-1-1999, actuarial assumptions were changed as a result of a 5 year experience study.

Effective for the 7-1-2000 valuation, eligibility for an unreduced retirement annuity under SCRS was reduced from 30 years of service to 28 year. The SCRS also adopted a deferred retirement option plan.

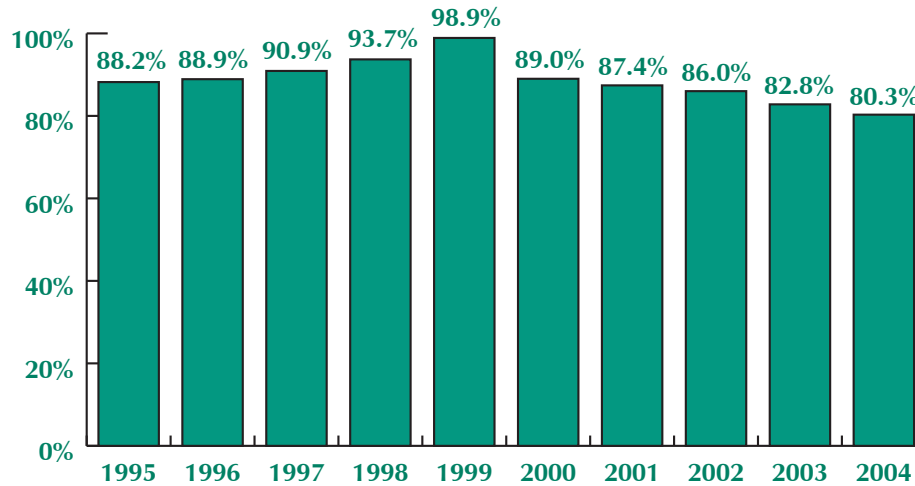
Effective 7-1-2003, actuarial assumptions were changed as a result of a 5 year experience study. The rates of salary increase assumption, the assumed retirement rates, disability incidence assumptions and withdrawal rate assumptions were revised for both SCRS and PORS. In addition, the assumed mortality rates for retired SCRS members were revised, along with the assumed mortality rates of active and disabled members for PORS.

**South Carolina Retirement System  
Funding Progress with Funded Ratios**

**Unfunded Accrued Liabilities**  
*(Amounts expressed in thousands)*

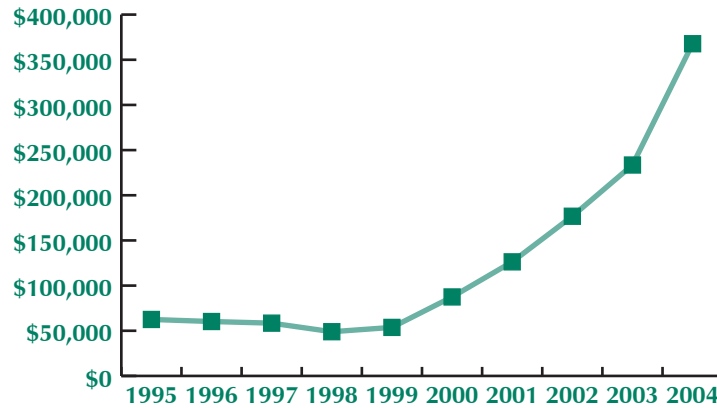


**Funded Ratios**  
*(Actuarial assets as a percentage of actuarial accrued liabilities)*

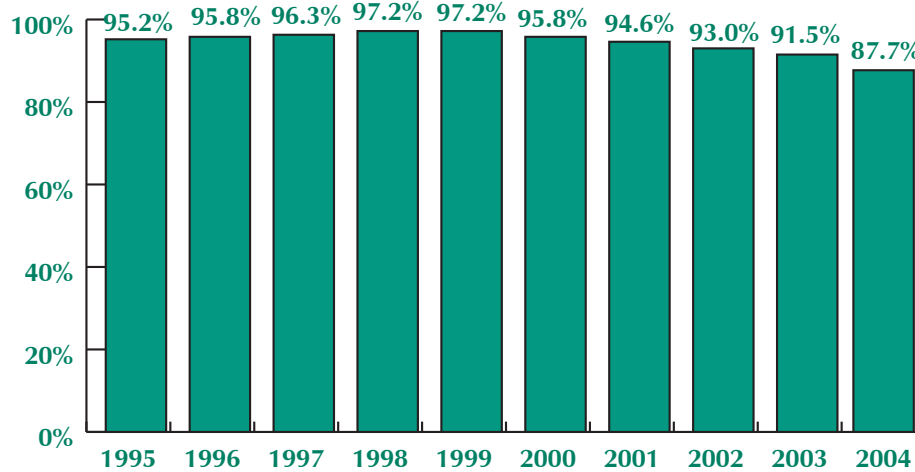


**Police Officers Retirement System  
Funding Progress with Funded Ratios**

**Unfunded Accrued Liabilities**  
*(Amounts expressed in thousands)*



**Funded Ratios**  
*(Actuarial assets as a percentage of actuarial accrued liabilities)*



## Actuarial Section

### Summary of Accrued and Unfunded Accrued Liabilities (Dollar amounts expressed in thousands)

GARS	Valuation Date	Valuation Assets	Aggregate Accrued Liabilities	Actuarial Assets as a % of Actuarial Accrued Liabilities	Unfunded Accrued Liabilities	Annual Active Member Payroll	UAL as a % of Active Member Payroll
	7-01-04	\$ 45,087	\$ 68,332	66.0%	\$ 23,245	\$ 3,839	605.5%
	7-01-03	44,682	66,619	67.1%	21,937	3,844	570.8%
	7-01-02	43,841	73,046	60.0%	29,205	4,515	646.9%
	7-01-01	42,788	68,291	62.7%	25,503	4,761	535.6%
	7-01-00	40,730	63,947	63.7%	23,217	4,858	477.9%
	7-01-99	38,685	63,501	60.9%	24,816	4,979	498.4%
	7-01-98	36,260	60,330	60.1%	24,070	4,810	500.4%
	7-01-97	33,627	60,052	56.0%	26,425	4,721	559.7%
	7-01-96	31,702	59,914	52.9%	28,213	4,771	591.3%
	7-01-95	30,528	58,577	52.1%	28,049	4,704	596.3%

JSRS	Valuation Date	Valuation Assets	Aggregate Accrued Liabilities	Actuarial Assets as a % of Actuarial Accrued Liabilities	Unfunded Accrued Liabilities	Annual Active Member Payroll	UAL as a % of Active Member Payroll
	7-01-04	\$ 112,016	\$ 185,052	60.5%	\$ 73,036	\$ 14,870	491.2%
	7-01-03	106,114	166,655	63.7%	60,541	14,437	419.3%
	7-01-02	100,074	166,440	60.1%	66,366	14,211	467.0%
	7-01-01	94,795	159,246	59.5%	64,451	14,109	456.8%
	7-01-00	87,536	144,631	60.5%	57,095	13,214	432.1%
	7-01-99	81,780	134,272	60.9%	52,492	12,748	411.8%
	7-01-98	75,699	124,756	60.7%	49,057	11,564	424.2%
	7-01-97	68,980	112,185	61.5%	43,205	11,221	385.0%
	7-01-96	62,850	101,020	62.2%	38,170	10,109	377.6%
	7-01-95	57,917	94,420	61.3%	36,503	9,417	387.6%

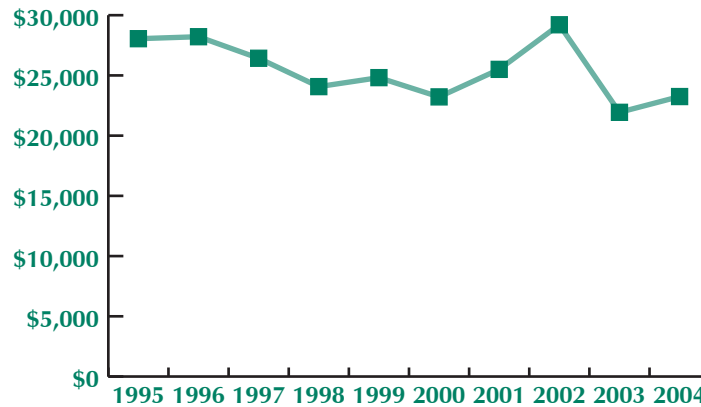
Note: Effective 7-1-1995, the investment return assumption was changed from 8% to 7.25% and the method of valuing assets was changed from book value to a smoothed market value.

The July 1, 2002, GARS valuation reflected the change in legislation effective January 1, 2003, which allows a member who has attained the age of 70 or has 30 years of service to retire and draw an annuity while continuing to serve in the General Assembly.

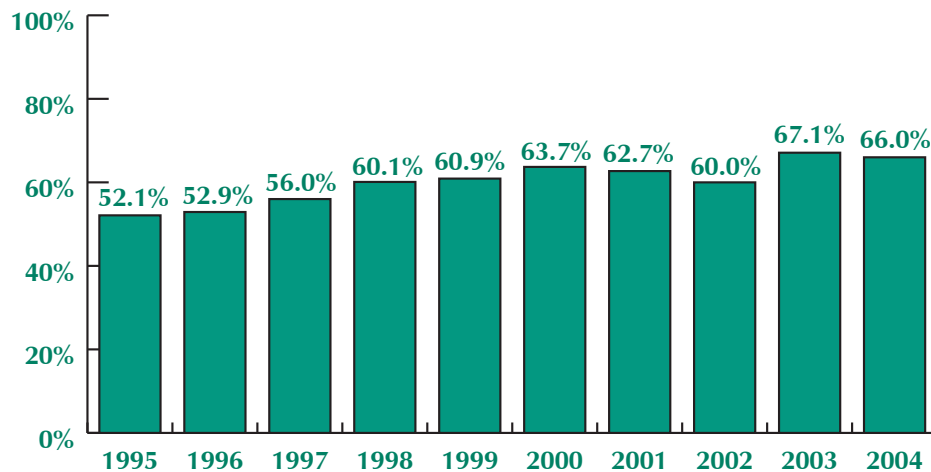
Effective 7-1-2003, actuarial assumptions for GARS and JSRS were changed as a result of a 5 year experience study. The rates of salary increase assumption, the assumed retirement rates, and disability incidence assumptions were revised.

**General Assembly Retirement System  
Funding Progress with Funded Ratios**

**Unfunded Accrued Liabilities**  
*(Amounts expressed in thousands)*



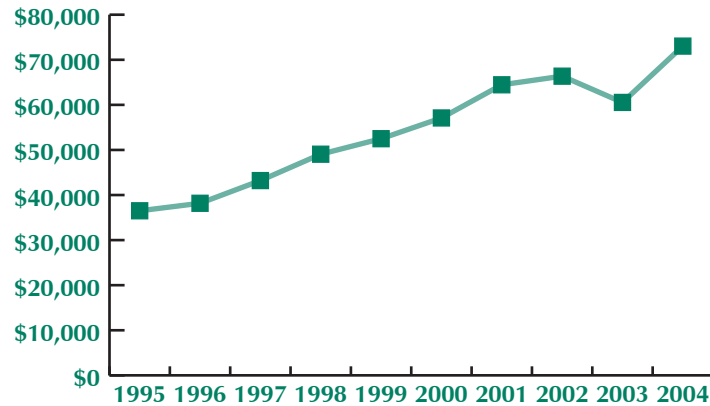
**Funded Ratios**  
*(Actuarial assets as a percentage of actuarial accrued liabilities)*



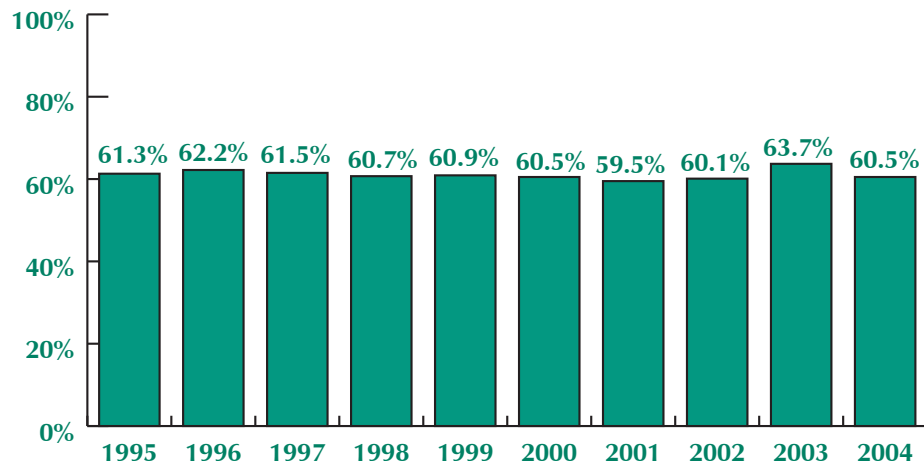


**Judges and Solicitors Retirement System  
Funding Progress with Funded Ratios**

**Unfunded Accrued Liabilities**  
*(Amounts expressed in thousands)*



**Funded Ratios**  
*(Actuarial assets as a percentage of actuarial accrued liabilities)*



---

## Actuarial Section

---

### South Carolina Retirement System Analysis of the Increase in the Unfunded Accrued Liability As of July 1, 2004 (Amounts expressed in millions)

<b>Item:</b>	<b>Amount of Increase (Decrease)</b>
Beginning of Year Unfunded Actuarial Liability	\$ 4, 201
Interest on Unfunded Actuarial Liability	305
Amortization Payment	(244)
Asset Experience	228
Salary Experience	(150)
Other Liability Experience	(124)
COLA	209
Benefit Changes	0
Assumption/Method Changes	690
Total Increase/(Decrease)	<u>\$ 914</u>
End of Year Unfunded Actuarial Liability	<u>\$ 5,115</u>

### Police Officers Retirement System Analysis of the Increase in the Unfunded Accrued Liability As of July 1, 2004 (Amounts expressed in millions)

<b>Item:</b>	<b>Amount of Increase (Decrease)</b>
Beginning of Year Unfunded Actuarial Liability	\$ 233.5
Interest on Unfunded Actuarial Liability	16.9
Amortization Payment	(28.4)
Asset Experience	68.0
Salary Experience	(19.0)
Other Liability Experience	50.9
COLA	20.2
Benefit Changes	0.0
Assumption/Method Changes	25.6
Total Increase/(Decrease)	<u>\$ 134.2</u>
End of Year Unfunded Actuarial Liability	<u>\$ 367.7</u>

Note: This analysis was not presented for the General Assembly Retirement System and the Judges and Solicitors Retirement System.

## Actuarial Section

### Solvency Test (Dollar amounts expressed in thousands)

	Valuation Date	(1) Active Member Contributions	(2) Retirants & Beneficiaries	(3) Active Members (Employer Funded Portion)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
						(1)	(2)	(3)
<b>SCRS</b>	7-01-04	\$ 4,750,077	\$ 14,184,765	\$ 7,043,010	\$ 20,862,659	100%	100%	27.4%
	7-01-03	4,627,360	13,240,368	6,531,203	20,197,936	100%	100%	35.7%
	7-01-02	4,512,402	11,600,395	6,333,777	19,298,174	100%	100%	50.3%
	7-01-01	4,339,747	10,367,913	6,454,487	18,486,773	100%	100%	58.6%
	7-01-00	4,563,513	7,484,050	7,367,149	17,286,108	100%	100%	71.1%
	7-01-99	4,278,861	6,944,021	5,075,556	16,120,513	100%	100%	96.5%
	7-01-98	3,972,263	6,305,903	5,674,179	14,946,070	100%	100%	82.3%
	7-01-97	3,657,217	5,866,156	5,453,806	13,621,362	100%	100%	75.1%
	7-01-96	3,399,816	5,349,968	5,312,308	12,499,235	100%	100%	70.6%
	7-01-95	3,085,531	4,950,378	4,944,588	11,453,462	100%	100%	69.1%
<b>PORS</b>	7-01-04	\$ 548,699	\$ 1,415,627	\$ 1,020,258	\$ 2,616,835	100%	100%	64.0%
	7-01-03	516,313	1,265,173	963,363	2,511,369	100%	100%	75.8%
	7-01-02	492,178	1,136,998	898,700	2,351,100	100%	100%	80.3%
	7-01-01	464,217	977,769	882,271	2,197,982	100%	100%	85.7%
	7-01-00	427,449	844,631	823,911	2,008,554	100%	100%	89.4%
	7-01-99	389,456	783,042	725,739	1,844,517	100%	100%	92.6%
	7-01-98	352,424	702,155	678,999	1,684,641	100%	100%	92.8%
	7-01-97	314,217	645,356	611,243	1,512,390	100%	100%	90.4%
	7-01-96	284,655	565,405	577,726	1,367,549	100%	100%	89.6%
	7-01-95	251,255	519,795	528,069	1,236,610	100%	100%	88.2%

Note: Effective 7-1-1995, actuarial assumptions were changed as a result of a 5 year experience study, the investment return assumption was changed from 8% to 7.25%, an assumption of future COLA adjustments was removed (SCRS and PORS) and the method of valuing assets was changed from book value to a smoothed market value.

Effective 7-1-1999, actuarial assumptions were changed as a result of a 5 year experience study.

Effective for the 7-1-2000 valuation, eligibility for an unreduced retirement annuity under SCRS was reduced from 30 years of service to 28 years. The SCRS also adopted a deferred retirement option plan.

Effective 7-1-2003, actuarial assumptions were changed as a result of a 5 year experience study. The rates of salary increase assumption, the assumed retirement rates, disability incidence assumptions and withdrawal rate assumptions were revised for both SCRS and PORS. In addition, the assumed mortality rates for retired SCRS members were revised, along with the assumed mortality rates of active and disabled members for PORS.

## Actuarial Section

### Solvency Test (Dollar amounts expressed in thousands)

	Valuation Date	(1) Active Member Contributions	(2) Retirants & Beneficiaries	(3) Active Members (Employer Funded Portion)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
						(1)	(2)	(3)
<b>GARS</b>	7-01-04	\$ 8,485	\$ 48,126	\$ 11,721	\$ 45,087	100%	76.1%	0.0%
	7-01-03	8,324	46,781	11,515	44,682	100%	77.7%	0.0%
	7-01-02	9,470	47,485	16,091	43,841	100%	72.4%	0.0%
	7-01-01	9,329	45,013	13,949	42,788	100%	74.3%	0.0%
	7-01-00	9,220	39,409	15,318	40,730	100%	80.0%	0.0%
	7-01-99	8,459	40,298	14,744	38,685	100%	75.0%	0.0%
	7-01-98	7,898	38,282	14,150	36,260	100%	74.1%	0.0%
	7-01-97	7,224	39,214	13,614	33,627	100%	67.3%	0.0%
	7-01-96	6,811	37,876	15,228	31,702	100%	65.7%	0.0%
	7-01-95	6,160	37,387	15,030	30,528	100%	65.2%	0.0%
<b>JSRS</b>	7-01-04	\$ 17,640	\$ 106,159	\$ 61,253	\$ 112,016	100%	88.9%	0.0%
	7-01-03	16,545	96,409	53,701	106,114	100%	92.9%	0.0%
	7-01-02	16,162	101,716	48,562	100,074	100%	82.5%	0.0%
	7-01-01	15,254	97,512	46,480	94,795	100%	81.6%	0.0%
	7-01-00	12,979	94,633	37,019	87,536	100%	78.8%	0.0%
	7-01-99	12,286	87,464	34,522	81,780	100%	79.5%	0.0%
	7-01-98	11,424	81,193	32,139	75,699	100%	79.2%	0.0%
	7-01-97	10,819	70,724	30,642	68,980	100%	82.2%	0.0%
	7-01-96	9,633	65,238	26,149	62,850	100%	81.6%	0.0%
	7-01-95	9,566	58,586	26,268	57,917	100%	82.5%	0.0%

Note: Effective 7-1-1995, the investment return assumption was changed from 8% to 7.25% and the method of valuing assets was changed from book value to a smoothed market value.

The July 1, 2002 GARS valuation reflected the change in legislation effective January 1, 2003, which allows a member who has attained the age of 70 or has 30 years of service to retire and draw an annuity while continuing to serve in the General Assembly.

Effective 7-1-2003, actuarial assumptions for GARS and JSRS were changed as a result of a 5 year experience study. The rates of salary increase assumption, the assumed retirement rates, and disability incidence assumptions were revised.

## Summary of Basic Provisions

SCRS	PORS	GARS	JSRS
<b>1. Membership</b>			
All permanent, full-time and part-time employees of covered employers must join unless specifically exempted by statute or are eligible and elect to participate in the State ORP.	To be eligible for PORS membership, an employee must be required by the terms of his employment, by election or appointment, to preserve public order, protect life and property, and detect crimes in the state; to prevent and control property destruction by fire; be a coroner or deputy coroner in a full-time permanent position; or be a peace officer employed by the Department of Corrections, the Department of Juvenile Justice, or the Department of Mental Health. Probate judges and coroners may elect membership in PORS. Magistrates are required to participate in PORS for service as a magistrate. PORS members, other than magistrates and probate judges, must also earn at least \$2,000 per year and devote at least 1,600 hours per year to this work, unless exempted by statute.	Generally, all persons are required to participate upon taking office as member of the General Assembly unless exempted by statute.	All solicitors, judges of a Circuit or Family Court, and justices of the Court of Appeals and Supreme Court are required to participate upon taking office unless exempted by statute.
<b>2. Employee Contributions</b>			
<b>Class I</b> 5% of earnable compensation	<b>Class I</b> \$21 per month		
<b>Class II</b> 6% of earnable compensation	<b>Class II</b> 6.5% of earnable compensation	10% of earnable compensation	8% of earnable compensation
<b>3. Employer Contributions</b>			
<b>Class I</b> 4.25% of earnable compensation	<b>Class I</b> 7.8% of earnable compensation		
<b>Class II</b> 7.55% of earnable compensation for State Agencies and Public Schools  6.7% of earnable compensation for all other participating employers	<b>Class II</b> 10.3% of earnable compensation	Annual lump-sum appropriation	41.65% of earnable compensation
<b>Group Life Insurance</b> 0.15% of earnable compensation	<b>Group Life Insurance</b> 0.2% of earnable compensation	<b>Group Life Insurance</b> Included within annual lump-sum appropriation	<b>Group Life Insurance</b> 0.45% of earnable compensation
<b>Accidental Death Program</b> N/A	<b>Accidental Death Program</b> 0.2% of earnable compensation	<b>Accidental Death Program</b> N/A	<b>Accidental Death Program</b> N/A

## Actuarial Section

SCRS	PORS	GARS	JSRS
<b>4. Vesting Requirements</b>			
5 years earned service	5 years earned service	8 years service	10 years earned service in position of judge; 8 years earned service in position of solicitor.
The member is entitled to a deferred annuity at age 60.	The member is entitled to a deferred annuity at age 55.	The member is entitled to a deferred annuity at age 60.	For members who joined prior to 7/1/2004, member is eligible for a deferred annuity at age 55 with 12 years in position. For members who joined after 6/30/2004, member is eligible for a deferred annuity at age 65.
<b>5. Normal Retirement Age</b>			
Age 65	Age 55	Age 60	Varies depending on service
<b>6. Requirements for Full Service Retirement</b>			
Age 65 or 28 years of credited service	Age 55 with 5 years of service or 25 years of credited service	Age 60 or 30 years of service	Age 70 with 15 years of service
The member must have a minimum of five years of earned service to qualify for retirement.	The member must have a minimum of five years of earned service to qualify for retirement.	Age 70 or 30 years of service while continuing to serve in the General Assembly	Age 65 with 20 years of service
			25 years of service as a judge regardless of age
			24 years of service as a solicitor regardless of age
			Age 65 with 4 years earned service as judge or solicitor and at least 25 years other service with the state if a member as of 6/30/2004.
<b>7. Early Retirement</b>			
Age 60 with 5% reduction for each year of age under age 65	Age 55 with five years of service credit	Age 60 with 8 years of service credit	Age 55 with 10 years of service in the position of a judge or 8 years of service in the position of a solicitor for members who joined the system prior to 7/1/2004. For members who joined after 6/30/2004, the age requirement is 65.
Age 55 with 25 years service, reduced 4% for each year of service under 28	The member must have a minimum of five years of earned service to qualify for early retirement.		
The member must have a minimum of five years of earned service to qualify for early retirement.			
<b>8. Formula for Normal Service Retirement</b>			
<b>Class I</b> 1.45% of Average Final Compensation times years of credited service	<b>Class I</b> \$10.97 per month for each year of service	4.82% of earnable compensation times years of credited service	Annual allowance of 71.3% of the current active salary of the member's position.
<b>Class II</b> 1.82% of Average Final Compensation times years of credited service	<b>Class II</b> 2.14% of Average Final Compensation times years of credited service		Benefit formula increases by 2.67% for each year of active service over 25 years for judges or over 24 years for solicitors. The monthly retirement allowance may not exceed 90% of

SCRS	PORS	GARS	JSRS
<b>8. Formula for Normal Service Retirement (continued)</b>			
			the current active salary for the member's position. A member retiring after 2003 will receive an additional benefit equal to employee contributions remitted plus accumulated interest after reaching the maximum 90% benefit.
<b>9. Requirements for Disability Retirement</b>			
5 years of earned service unless injury is job related	5 years of earned service unless injury is job related	5 years of credited service	5 years of credited service
<b>10. Formula for Disability Retirement</b>			
The disability retirement benefit based on a projection of service credit to age 65 with an actuarial reduction.	The disability retirement benefit is based on a projection of service credit to age 55.	The disability retirement benefit is based on the greater of the following options: a. Service benefit based upon actual credited service or b. 50% of service benefit based on projection of service to earlier of age 60 or 35 years service.	The disability retirement benefit is based on the service retirement formula.
<b>11. Benefit Options</b>			
<b>Option A (Maximum/Retiree Only)</b> Formula benefit as calculated in item 8. Non-recovered contributions paid upon death.	<b>Option A (Maximum/Retiree Only)</b> Formula benefit as calculated in item 8. Non-recovered contributions paid upon death.	<b>Maximum Benefit (Retiree Only)</b> Formula benefit as calculated in item 8. Non-recovered contributions paid upon death.	<b>Maximum Benefit Retiree/One-Third Spouse)</b> Formula as calculated in item 8. Continued annuity of one-third of member's benefit to a spouse beneficiary upon death of retiree or return of contributions to a designated non-spouse beneficiary.
<b>Option B (100% - 100% Joint Retiree/Survivor)</b> Provides a reduced (from Option A) lifetime benefit that upon retiree's death continues to retiree's beneficiary.	<b>Option B (100% - 100% Joint Retiree/Survivor)</b> Provides a reduced (from Option A) lifetime benefit that upon retiree's death continues to retiree's beneficiary.	<b>Option 1</b> Provides a reduced (from the Maximum Benefit) lifetime benefit that upon retiree's death continues to retiree's beneficiary. Benefit will not revert to Maximum if all of the retiree's beneficiaries predecease the retiree.	<b>Optional Allowance</b> Provides a reduced (from the Maximum Benefit) lifetime annuity that upon the retiree's death will continue at one-third of the retiree's annuity to a non-spouse beneficiary (or in equal shares to multiple beneficiaries).
<b>Option C (100% - 50% Joint Retiree/Survivor)</b> Provides a reduced (from Option A) lifetime benefit that upon retiree's death will continue to retiree's beneficiary at 50% of the retiree's annuity.  Note: If a retiree selects Option B or Option C and all of the retiree's beneficiaries predecease the retiree, the retiree's benefit will revert to Option A.	<b>Option C (100% - 50% Joint Retiree/Survivor)</b> Provides a reduced (from Option A) lifetime benefit that upon retiree's death will continue to retiree's beneficiary at 50% of the retiree's annuity.  Note: If a retiree selects Option B or Option C and all of the retiree's beneficiaries predecease the retiree, the retiree's benefit will revert to Option A.	<b>Option 2</b> Provides a reduced (from the Maximum Benefit) lifetime benefit that upon retiree's death will continue to retiree's beneficiary at 50% of the retiree's annuity. Benefit will not revert to Maximum if all of the retiree's beneficiaries predecease the retiree.  <b>Revert to Maximum (1A or 2A)</b> This feature will allow benefits to be changed to the Maximum Benefit if the retiree selects Option 1 or Option 2 and all of the retiree's beneficiaries predecease the retiree.	

SCRS	PORS	GARS	JSRS
<b>12. Teacher and Employee Retention Incentive (TERI) Program</b>			
Upon meeting retirement eligibility, a member can elect to retire and continue working under the TERI program for a maximum of five years, after which employment will cease. During TERI participation, the retirement annuity will not be paid to the TERI retirees, but will be accumulated in TERI accounts and will be distributed to the members upon termination of employment. The annuity amount credited to the TERI account is the same monthly annuity that would have been paid directly to the retiree had he or she not deferred the receipt of his or her annuity while continuing to work as a TERI participant. No interest is credited to the TERI account. Member contributions cease, but employer contributions continue during TERI participation.	N/A	N/A	N/A
<b>13. Post Retirement Increase</b>			
Increase in Consumer Price Index, up to 4%. (Increases are not guaranteed and must be approved annually subject to compliance with statute.)	Increase in Consumer Price Index, up to 4%. (Increases are not guaranteed and must be approved annually subject to compliance with statute.)	Retired member receives benefit based on current salary for member's position.	Retired member receives benefit based on current salary for member's position.
<b>14. Accidental Death Program</b>			
N/A	Provides 50% of earnable compensation at time of accidental death in the line of duty as an annuity to either the surviving spouse, children, or parents.	N/A	N/A
<b>15. Group Life Insurance Benefits</b>			
<ul style="list-style-type: none"> <li>Lump-sum payment equal to one year's salary payable to the beneficiary upon the death of an active member with at least one year of service.</li> <li>No service requirement for death resulting from an injury arising out of the actual performance of duties for an active member.</li> <li>Lump-sum payment to retiree's beneficiary of up to \$6,000 based upon years of service at retirement.</li> </ul>	<ul style="list-style-type: none"> <li>Lump-sum payment equal to one year's salary payable to the beneficiary upon the death of an active member with at least one year of service.</li> <li>No service requirements for death resulting from an injury arising out of the actual performance of duties for an active member.</li> <li>Lump-sum payment to retiree's beneficiary of up to \$6,000 based upon year of service at retirement.</li> </ul>	<ul style="list-style-type: none"> <li>Lump-sum payment equal to one year's salary payable to the beneficiary upon the death of an active member with at least one year of service.</li> <li>No service requirement for death resulting from an injury arising out of the actual performance of duties for an active member.</li> <li>Lump-sum payment to retiree's beneficiary of up to \$3,000 based upon years of service at retirement.</li> </ul>	<ul style="list-style-type: none"> <li>Lump-sum payment equal to one year's salary payable to the beneficiary upon the death of an active member with at least one year of service.</li> <li>No service requirement for death resulting from an injury arising out of the actual performance of duties for an active member.</li> <li>Lump-sum payment to retiree's beneficiary of up to \$3,000 based upon years of service at retirement.</li> </ul>



## Actuarial Section

---

### SCRS

### PORS

### GARS

### JSRS

#### 16. Withdrawal of Employee Contributions

Accumulated contributions, plus interest, payable 90 days after termination of all covered employment.

Accumulated contributions, plus interest, payable 90 days after termination of all covered employment.

Accumulated contributions, plus interest, paid as promptly as feasible after request after termination of all covered employment.

Accumulated contributions, plus interest, paid as promptly as feasible after request after termination of all covered employment.